



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,821	11/20/2001	Ronald J. Vidal	1757.0260001	8685
25764	7590	08/29/2005	EXAMINER	
FAEGRE & BENSON LLP PATENT DOCKETING 2200 WELLS FARGO CENTER MINNEAPOLIS, MN 55402			SAFAVI, MICHAEL	
			ART UNIT	PAPER NUMBER
			3673	

DATE MAILED: 08/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/988,821

Applicant(s)

VIDAL ET AL.

Examiner

M. Safavi

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 June 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-10 and 13-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morishige in view of Peterson when considering the Federal Highway Administration report/publication "Prevention and Control of Highway Tunnel Fires", (hereinafter FHA).**

Morishige discloses, Figs. 38, 42, and 44, for example, installing a plurality of communication ducts and cables 6036, (cables shown by circular 6036 with the ducts shown as that part of tunnel surrounding the cables 6036), extending from one onshore first point to an offshore point or "offshore termination point", at or along 6013 or any point of 6002 extending along the seabed, as well as from another onshore second point to an or the same offshore point, (see Fig. 38, for example), and col. 30, lines 59-64. Sections 6002 and 6022 also constitute a plurality of communication ducts through which cables 6036 extend. However, Morishige appears silent as to the specific procedure of how the cables are run/connected along the assembly from one point to another.

Peterson discloses installation of a plurality of cables from one onshore first point to an offshore point, or "offshore termination point", as well as from another onshore

second point to an or the same offshore point, col. 1, lines 37-47; col. 2, lines 16-23; col. 3, lines 57-65; 6, lines 36-43; and co. 6, line 57 to col. 7, line 6. The cables may be placed from onshore to offshore or from offshore to onshore. The offshore point, or "offshore termination point", can be an offshore platform and may extend several kilometers including up to and more than 50 kilometers from the shore, col. 3, lines 57-65. In both Morishige and Peterson the extension of the ducts and cables can be seen as spanning a shallow region as well as a relatively deep region of water, which would inherently include a continental shelf portion of an ocean floor. Peterson teaches splice connection of cables at a "sea end" or offshore point as by a cable joint, col. 7, lines 4-7 and col. 2, lines 19-22.

FHA publication discloses, or at least suggests, communication lines extending within tunnels including tunnels advancing through a body of water. See, for example, page 5 disclosing TV surveillance within the Hampton Roads Bridge Tunnel, Va.; or page 11 disclosing telephone lines along the Chesapeake Bay Bridge Tunnel; or page 13 and 14 disclosing telephone lines as well as fire alarm buttons and boxes within each of the Big Walker Tunnel, Va. and Caldecott Tunnel, Oakland, Ca.

To have extended the communication ducts and cables of Morishige from either onshore point to offshore point, or from offshore point to onshore point, for as much as at least 2 kilometers and up to about 20 kilometers from either onshore point to an offshore point as well as span a continental shelf in the process with the depth of an offshore point being at or less than 200 meters, thus covering all offshore intervals which would be included within a onshore to onshore span, (i.e., including all depths,

Art Unit: 3673

lengths, and formations within the span of water), would have constituted an obvious expedient to one having ordinary skill in the art at the time the invention was made in view of Peterson with Peterson disclosing the flexibility or adaptability of either direction of point to point installation, (i.e., Peterson teaches either onshore point to offshore point, or offshore point to onshore point). To have provided for splice connections anywhere along the span of the tunnel ducts 6002/6022, thus allowing for deployment of shortened, more manageable communication cable lines as well as to distribute the necessary utilities to the various corresponding components such as lights 6033 or monitoring cameras along the tunnel, would have constituted a further obvious expedient to one having ordinary skill in the art at the time the invention was made in view of Peterson's teachings at col. 7, lines 4-7 and col. 2, lines 19-22. With such a modification of connecting cables at one if not various points along the Morishige tunnel Morishige, as modified, would provide for first and second cables as well as third and fourth cables, 6036 of Fig. 44, with a first cable extending from a first point to an offshore point and connected to a second cable extending from a second point while a third cable extending from a point of location to an offshore point is connected to a fourth cable extending from another point of location. In other words, cables from opposite ends would constitute cables extending from various points onshore to a point or points offshore with ends of the cables being spliced or connected one to another. Providing for any type of "communication" cable including telephone, television or alarm cables, thus allowing use of such equipment when necessary or as a consistent monitoring arrangement, would have constituted a further obvious expedient to one

having ordinary skill in the art at the time the invention was made as taught by FHA publication.

As for claim 34, Morishige teaches an outer duct 6007a encompassing at least two ducts, (those ducts within which cables 6036 lie), with the outer duct including a watertight seal with air in the seal between the outer duct and the inner ducts, col. 29, lines 36-39. The ducts are then installed as by eliminating the trapped air such that the ducts sink in the water, col. 29, lines 40-43.

**Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over United Kingdom reference 2,357,944 in view of Peterson when considering any of Fischer or European reference 1,039,201 or Japanese reference 9-322371.**

U.K. '944 discloses, Figs. 4 and 10, for example, installing a plurality of communication ducts and cables 6, 8, 44, etc. extending from one onshore first point to an offshore point or "offshore termination point", including to an offshore platform, as well as from another onshore second point to an or the same offshore point, (see Figs. 7 and 10, for example). However, U.K. '944 appears silent as to the specific procedure of how the cables are run/connected along the assembly from one point to another as well as a specific teaching of a plurality of conduits to hold cables 6, 8, 44, etc.

However, Peterson discloses installation of a plurality of cables from one onshore first point to an offshore point, or "offshore termination point", as well as from another onshore second point to an or the same offshore point, col. 1, lines 37-47; col. 2, lines 16-23; col. 3, lines 57-65; 6, lines 36-43; and co. 6, line 57 to col. 7, line 6. The cables

Art Unit: 3673

may be placed from onshore to offshore or from offshore to onshore. The offshore point, or "offshore termination point", can be an offshore platform and may extend several kilometers including up to and more than 50 kilometers from the shore, col. 3, lines 57-65. In both Morishige and Peterson the extension of the ducts and cables can be seen as spanning a shallow region as well as a relatively deep region of water, which would inherently include a continental shelf portion of an ocean floor. Peterson teaches splice connection of cables at a "sea end" or offshore point as by a cable joint, col. 7, lines 4-7 and col. 2, lines 19-22. Peterson further teaches burying cables within the undersea bed.

Further, each of Fischer, European reference '201, and Japanese reference '371 teach utilization of a conduit to lay cables within an underwater environment with Japanese reference '371 and European reference '201 teaching use of multiple conduits, Figs. 1 and 3-6 of Japanese reference '371 and Figs. 11, 13, and 15-20 of European reference '210 with each duct, (2 of European '201 and 5 or A, B, C of Japanese '371), constituting "separate and distinct conduits").

To have extended the communication ducts and cables of U.K. '944 from either onshore point to offshore point, or from offshore point to onshore point, for as much as at least 2 kilometers and up to about 20 kilometers from either onshore point to an offshore point as well as span a continental shelf in the process with the depth of an offshore point being at or less than 200 meters, thus covering all offshore intervals which would be included within a onshore to onshore span, (i.e., including all depths, lengths, and formations within the span of water), would have constituted an obvious

expedient to one having ordinary skill in the art at the time the invention was made in view of Peterson with Peterson disclosing the flexibility or adaptability of either direction of point to point installation, (i.e., Peterson teaches either onshore point to offshore point, or offshore point to onshore point). U.K. '944 itself expresses the flexibility or adaptability of installation along and through various waterways.

To have provided for splice connections anywhere along the span of the ducts, thus allowing for deployment of shortened, more manageable communication cable lines, would have constituted a further obvious expedient to one having ordinary skill in the art at the time the invention was made in view of Peterson's teachings at col. 7, lines 4-7 and col. 2, lines 19-22. With regard to claim 22: U.K. '944 teaches, (as in Figs. 1, 7, and 11), a plurality of cables extending from anyone of various points to an offshore location. Thus, U.K. '944 teaches a first cable extending from a first point to an offshore point and connected to a second cable extending from a second point while a third cable extending from a point of location to an offshore point is connected to a fourth cable extending from another point of location.

Providing U.K. '944 with ducts or conduits within which the cables are placed, thus assuring a well protected communication line, would have been a further obvious expedient to one having ordinary skill in the art at the time the invention was made as taught by any of Fischer, European reference '201, and Japanese reference '371. As stated above each of European reference '201, and Japanese reference '371 teach a plurality of ducts or conduits however, it would have been obvious to one having ordinary skill in the art to provide the resulting U.K. '944 arrangement with any number



of ducts or conduits to hold the communication cables since it is well known that mere duplication of parts has no patentable significance unless a new and unexpected result is produced. In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960). Further, it is well known that making an integral item or a one piece item into several pieces is of no patentable consequence In re Dulberg, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961).

### ***Response to Arguments***

Applicant's arguments filed June 13, 2005 have been fully considered but they are not persuasive. As for Applicant's remark that Examiners action may not appear complete, the Office action of February 16, 2005 has taken into consideration each and every limitation of the claims. The rejections set forth in the action of February 16, 2005 as well as in the instant Office action show or teach the limitations of the respectively rejected claim language. It is not seen how the rejection presented within the Office action of February 16, 2005 appears as "incomplete and improper".

As for the FHA reference, the examples referenced within FHA are dated as early as 1982, (e.g., 11/82-3/83) with the report having been posted as early as February 03, 2001 with updates showing as October 19, 2000 and May 19, 2000 and a copyright of 1999-2000. Further, the publication no. of the FHA publication indicates a publication year of 1983.

With regard to Applicant's arguments against the rejection of claims over Morishige in view of Peterson when considering FHA, Morishige discloses a duct or

ducts carrying "communication cables" as along either side of the tunnel of Fig. 44 within which communication cables 6036 run. And, contrary to Applicants' allegation, the principle operation of Morishige would not be destroyed or compromised with the modification suggested by either of Peterson or FHA. It is not seen why the combination of Morishige in view of Peterson when considering FHA would require "mounting massive cylinders...on a remote controlled and self propelled sea plough for burying in the sea bed." Peterson had been utilized to teach direction of application of the Morshige ducts, including distance from shore, while FHA had been utilized to teach "communication lines" extending through tunnels advancing on land and water. As such, one of ordinary skill in the art would have found it obvious, while taking into consideration the teachings of Morishige, Peterson and FHA, to have assembled Morishige as by starting at one point or another on land to a point or another within the water. Thought Morishige may desire at sea construction of ducts does not detract from any desire to assemble ducts on land to place within the water. One of ordinary skill in the art would not dismiss the teachings of Morishige as at lines 25-35 in col. 4 of Morishige simply because Morishige desires a different approach. See also, col. 30, lines 59-64. In fact the teachings of Morishige in general, and particularly at lines 25-35 of col. 4, disclose the same procedure set forth in paragraph 18 on page 8 of the instant specification.

As for Applicants' argument bridging pages 10 and 11 of the response, the proposed modification set forth in each of the above rejections generates a method and system serving to read upon the rejected claims. The field of endeavor of each of

Morishige, Peterson and FHA is the same as that of the instant application namely extending conduits and cables from land into a body of water.

As for Applicant's arguments against the rejection of claims over U.K. '944 in view of Peterson when considering any of Fischer, European reference '210, and Japanese reference '371, Peterson has been utilized to teach direction of application of the U.K. '944 ducts, including distance from shore, while each of Fischer, European reference '210, and Japanese reference '371 had been utilized to teach application of ducts through which the U.K. '944 cables may run with Japanese reference '371 and European reference '201 teaching use of multiple conduits. Thus, one of ordinary skill in the art would have found it obvious to provide for multiple ducts within the U.K. environment to carry the various cables assuring a well-protected communication line.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Safavi whose telephone number is (571) 272-7046. The examiner can normally be reached on Mon.-Thur., 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather Shackelford can be reached on (571) 272-7049. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



**MICHAEL SAFAVI  
PRIMARY EXAMINER  
ART UNIT 354**

M. Safavi  
August 18, 2005